

How to Calculate Calories in a Food

Carbohydrates, fats, proteins, and alcohol can be broken down to yield energy for the cells' activities.

While all four of these compounds/structures will provide energy (calories) to the cells, carbohydrates, fats, and proteins are considered nutrients because they also support life and growth whereas alcohol is considered poison.

Basic Information:

1 gram of carbohydrate	=	4 calories of energy to a cell
1 gram of fat	=	9 calories of energy to a cell
1 gram of protein	=	4 calories of energy to a cell
1 gram of alcohol	=	7 calories of energy to a cell



Using the basic information provided above, solve the following question.

Question: How many calories are in a beverage which contains the following?

- 10 grams of carbohydrate
- 5 grams of fat
- 2 grams of protein
- 5 grams of alcohol

How to Calculate Calories -- Step 1

Multiply the carbohydrate grams by 4 calories per gram.

Beverage Information:

$$10 \text{ grams of carbohydrate} \times 4 \text{ calories per gram} = 40 \text{ calories}$$

Total calories in beverage =

How to Calculate Calories -- Step 2

Multiply the fat grams by 9 calories per gram.

Beverage Information:

10 grams of carbohydrate	x 4 calories per gram	= 40 calories
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5 grams of fat	x 9 calories per gram	= 45 calories
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Total calories in beverage =

How to Calculate Calories -- Step 3

Multiply the protein grams by 4 calories per gram.

Beverage Information:

10 grams of carbohydrate	x 4 calories per gram	= 40 calories
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5 grams of fat	x 9 calories per gram	= 45 calories
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2 grams of protein	x 4 calories per gram	= 8 calories
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Total calories in beverage =

How to Calculate Calories -- Step 4

Multiply the alcohol grams by 7 calories per gram.

Beverage Information:

10 grams of carbohydrate	x 4 calories per gram	= 40 calories
5 grams of fat	x 9 calories per gram	= 45 calories
2 grams of protein	x 4 calories per gram	= 8 calories
5 grams of alcohol	x 7 calories per gram	= 35 calories

Total calories in beverage =

How to Calculate Calories -- Step 5

Add all calories from each calorie source for total calories.

Beverage Information:

10 grams of carbohydrate	x 4 calories per gram	= 40 calories
5 grams of fat	x 9 calories per gram	= 45 calories
2 grams of protein	x 4 calories per gram	= 8 calories
5 grams of alcohol	x 7 calories per gram	= 35 calories

Total calories in beverage = 128 calories



Answer: There are 128 calories in the beverage.